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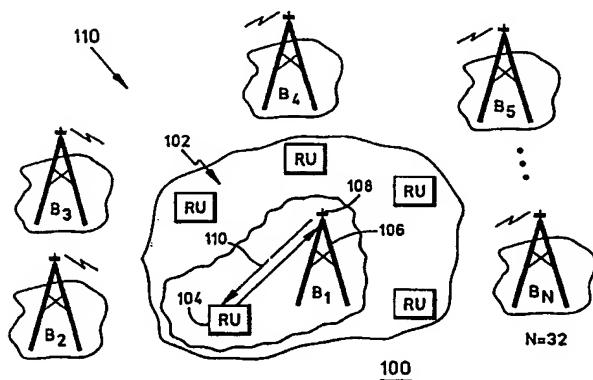
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(54) Title: METHODS AND APPARATUS FOR USE IN OBTAINING FRAME SYNCHRONIZATION IN AN OFDM COMMUNICATION SYSTEM



(57) **Abstract:** Methods and apparatus suitable for use in obtaining frame synchronization in an Orthogonal Frequency Division Multiplexing (OFDM) communication system are described. The OFDM communication system includes a plurality of base units which simultaneously transmit a plurality of pilot tones in a predetermined pilot tone pattern during one or more time slots of a plurality of time slots defining a message slot. The method includes the steps of receiving OFDM signals within a time slot; determining a signal level in the OFDM signals at each frequency of a plurality of pilot tone frequencies; performing a correlation between the signal levels and the predetermined pilot tone pattern; generating and storing a pattern detection value based on performing the correlation; and repeating the receiving, determining, performing, generating and storing for each time slot of the plurality of time slots. The method includes the further steps of repeating, for a plurality of message frame durations, the above steps of repeated receiving, determining, performing, and generating to produce a plurality of averaged pattern detection values; performing a correlation between the plurality of averaged pattern detection values and a predetermined message frame pattern; and detecting a boundary of a message slot based on performing the correlation.

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